

Amendments to the Claims:

Please add claims 28-35. This listing of claims will replace all prior versions and listings of claims in this Application.

Listing of Claims:

1. (Original) A method of endoprosthetic discectomy surgery comprising the steps of receiving information about the size, shape and nature of a patient's damaged natural spinal vertebral bodies and discs from radiographs, CT and/or MRI scans or other imaging devices specifically determining the anterior-posterior and lateral dimensions of each involved vertebral body, the vertical height of the anterior aspect of each involved vertebral and/or proximate vertebral body, and the vertical height of the mid-portion of the involved and proximate normal intervertebral disc spaces, thereafter constructing one or more prosthetic vertebral body units and prosthetic disc units in conformity with the received information, each prosthetic disc unit including confronting L-shaped concaval-convex elements and a resilient body interposed between the concaval-convex elements; and an endoprosthetic vertebral body interposed between and engaging the adjacent disc units; and thereafter implanting the completed and conformed construction in the patient's spine.

2. (Original) A method according to claim 1 including the step of constructing a plurality of prosthetic disc units and further including the step of attaching the disc units to an endoprosthetic vertebral body prior to the step of supplying the assembly to the surgeon.

3. (Original) A method according to claim 1 further including the steps of surgically milling spinal bone surfaces with concave surfaces to receive confronting

convex surfaces of the concaval-convex elements, and installing at least one disc unit having concaval-convex elements with said convex surfaces in the patient's spine.

4.-11. (Cancelled)

12. (Previously Presented) A method of surgery comprising:
forming partially hemispherical surfaces in endplates of confronting vertebral bodies,
inserting between the formed partially hemispherical surfaces an intervertebral disc endoprosthesis, comprising:
confronting concaval-convex supports, each support having an exterior convex surface adapted to mate with one of the formed partially hemispherical surfaces, and
a resilient body interposed between the concaval-convex supports such that the supports are capable of movement relative to the resilient body element after the endoprosthesis has been inserted between the formed partially hemispherical surfaces;
prior to forming the partially hemispherical surfaces in the vertebral body endplates, implanting at least one anchor into a hole having a predetermined position in an anterior surface of at least one adjacent vertebral body; and
affixing a bone surface milling mechanism to the at least one anchor.

13. (Previously Presented) The method of surgery according to claim 12, wherein the bone surface milling jig positions a milling head or bit, which forms the concave surfaces in the endplates of the vertebral bodies.

14. (Currently Amended) The method of surgery according to claim 12, further comprising:

(e) removing the bone surface milling jig after forming the concave surfaces in the endplates of the vertebral bodies.

15.- 27. (Cancelled)

28. (New) A intervertebral disc prosthesis comprising:

a first support having an outer convex surface adapted to fixedly mate with a first previously-formed concave surface of an end plate of a first vertebral body, and

a second support having an outer convex surface adapted to mate with a second previously-formed concave surface of an end plate of a second vertebral body.

29. (New) The intervertebral disc prosthesis of claim 28 wherein the first and second previously-formed concave surfaces are first and second previously-milled concave surfaces.

30. (New) The intervertebral disc prosthesis of claim 28 wherein the first support further includes a first inner concave surface and the second support further includes a second inner concave surface.

31. (New) The intervertebral disc prosthesis of claim 28 further comprising: a central portion retained by the first and second supports.

32. (New) The intervertebral disc prosthesis of claim 28 further comprising a seal member attached between the first and second supports.

33. (New) A method of surgery comprising:
forming concave surfaces in the endplates of first and second vertebral bodies;
inserting between the formed concave surfaces an intervertebral disc
endoprosthesis;
fixedly engaging a first support of the endoprosthesis to the formed concave
surface of first vertebral body; and
fixedly engaging a second support of the endoprosthesis to the formed concave
surface of the second vertebral body,
wherein the first and second supports have exterior convex surfaces adapted to
mate with the first and second formed concave surfaces, respectively.

34. (New) The method of surgery of claim 33 wherein forming concave
surfaces in the endplates of the first and second vertebral bodies further comprises milling
concave surfaces in the endplates of the first and second vertebral bodies.

35. (New) The method of surgery of claim 34 wherein milling concave
surfaces in the endplates of the first and second vertebral bodies further comprises
attaching a milling jig to at least one of the first and second vertebral bodies.